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SEP 24 2010

DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT
OFFICE OF LAND QUALITY

To:

**#09-615(WPCB) [CFO Rulemaking]
Janet Pittman
Rules Development Branch
Office of Legal Counsel
Indiana Department of Environmental Management
100 North Senate Avenue MC 65-46
Indianapolis, Indiana 46204-2251
Fax: 317-233-5970**

From:

**Michael J. McCloskey, DVM
Fair Oaks Dairy Farms, LLC
5431 E. 600 N.
Fair Oaks, IN 47943**

Date: September 23, 2010

Sent via fax and UPS Next Day Air

Comments on Draft Rule 327 IAC 19: Wording highlighted in **BOLD** are taken from the document Second Notice of Comment Period, LSA Document #09-615

POTENTIAL FISCAL IMPACTS

We run an exemplary innovative facility and believe regulations should give incentive where possible to go above and beyond the minimum requirements in the rules. To that end the rules should significantly differentiate between CFO requirements and NPDES CAFO requirements. Such an approach can reduce the fiscal impacts to the regulated community, and provide additional environmental protection for the citizens of Indiana at no additional cost to the taxpayer.

Several aspects of the draft rule as written will result in increased cost to the regulated community and require additional IDEM resources to fully and fairly implement at all facilities regardless of location and size. Specific examples of these cost increases will be given in the comments that follow.

Phosphorus Based Land Application:

1) Phosphorus based land application. This could modestly increase costs for the regulated community. Previously, land application of manure was based on soil nitrogen content. If soil phosphorus levels are above the levels listed in the draft rule, it

could limit the amount of acreage on which producers may land apply. IDEM does not anticipate that the effects of this new policy will be large since 75% of the land application area in Indiana is utilized by CAFOs, which have been using phosphorus as a limiting factor since 2006.

Current federal NPDES CAFO rules do not require farms which self certify that they do not propose to discharge to conduct Phosphorus based land application. We believe the fiscal impact to the regulated community will be greater than what IDEM suggests. IDEM should evaluate the fiscal impact of this rule against the requirements of the current CFO rule only and not against the requirements of the current NPDES CAFO rule.

It is true that the existing 327 IAC 15-15 has been requiring adherence to NRCS 590 land application practices which consider phosphorus as a limiting factor. Our experience suggests that CAFO producers have been managing for phosphorus using practices that have been acceptable to NRCS (the drafters of the 590 standard). There is a big difference between the way the regulated community has been interpreting the 590 standard (based on the NRCS 590 authors guidance) and the way IDEM just recently began interpreting the 590 standard. Recent field inspections conducted by IDEM personnel have now revealed an interpretation of 590 standards that is more cumbersome than the interpretations earlier provided by NRCS. It had been the case that if a farm was land applying manure in a consistent manner across a large field, that NRCS 590 would allow the producer to average the individual sample locations within a field into an average field phosphorus level which would be used for field level management decisions. The most recent interpretation from compliance inspectors (which we had not seen revealed to producers until mid 2010) is to prohibit any manure application onto the high soil test area within the field. Since the new rule proposes to copy language from NRCS 590 the 590 Standard should be cited and applied by the same standards used by NRCS, field average levels applied to the entire field.

Mortality Management:

327 IAC 19-7-6:

Current CAFO mortality management requirements seem to be effective under the existing IAC and BOAH regulations. Have there been instances of actual harm related to mortality management practices, and do the proposed changes have a rational basis? It is unclear if there is solid science or a history of need present in the changes. Currently regulated by BOAH per 345 IAC 7-7-3(a)(2), leave as is no matter what soil type since it is proven that this works and there have not been any issues.

Ground Water Monitoring:

327 IAC 19-10-1(b)(3)(i):

- *Owners/operators of a manure storage facility shall develop and follow a written ground water monitoring plan. This plan must include the following:*

Monitoring parameters, including:

*Field pH
Field Specific Conductance
Ammonia-N
Chloride
Fecal Coliform Bacteria
Nitrate-N
Phosphate
Sulfate, and
Total Organic Carbon*

The language addressing Ground Water Monitoring is too open ended with too many unknowns regarding sampling frequency, testing equipment and subsequent fiscal impact. CAFO required documentation of ground water monitoring should remain available to IDEM and analyzed when needed, as is done today, no change is necessary.

Statistically Significant Increase:

327 IAC 19-10-1(c):

- *If the owner/operator determines under item (b)(3)(vii) of this section that there is a statistically significant increase for parameters at any monitoring device, the owner/operator shall notify the commissioner of this finding in writing within fourteen (14) days. The notification must indicate what parameters have shown statistically significant increases over background levels. The department may then require corrective action.*

The language addressing Ground Water Monitoring is too open ended with too many unknowns regarding sampling frequency, testing equipment and subsequent fiscal impact. CAFO required documentation of ground water monitoring should remain available to IDEM and analyzed when needed, as is done today, no change is necessary.

Phosphorus Application:

327 IAC 19-14-3(c):

- *Available phosphorus (P) applications from all sources shall be based on the following soil test P values:*
 - (1) Less than fifty (50) parts per million (ppm) soil test P: nutrient application rates allowed up to the N needs of the existing or following crop to be grown.*
 - (2) Fifty to one hundred (50-100) ppm soil test P: P application shall not exceed one and a half (1.5) times the total crop P removal for the existing or proposed crop to be grown.*
 - (3) Greater than one hundred (100) ppm soil test P: eliminate P applications, if possible, otherwise P application shall not exceed the existing or proposed crop P removal rate.*

It is our understanding that IDEM considers its authority for control of phosphorus application to be IC 13-18-10 which specifies management practices designed to reduce the potential for manure (not phosphorus) to be conveyed off a site by runoff or soil erosion. The proposed phosphorus threshold limits attempt to address phosphorus transport, the source of which can be background levels of soil phosphorus in addition to phosphorus from manure.

Soil Test Phosphorus (STP) is not an indication of leaching potential or total P in the soil but is only an indication of how much P is available for plant use. Using soil test phosphorus as proposed in the draft rule requires speculation beyond the range of crop response. This use is still unproven and scientifically indefensible. Phosphorus movement and bioavailability is affected by numerous factors such as soil type, soil pH, clay percentage, soil roughness, soil residue cover, tillage intensity, land slope, vegetative cover, distance to a sensitive water body, etc. These factors should be used within a risk based assessment which considers the need for managing phosphorus in surface runoff with best management practices that increase nutrient trapping and reduce total runoff.

This section of rule should be re-drafted to address Phosphorus conveyance by runoff and soil erosion only, and to allow for site specific review of risks through the use of a Phosphorus risk assessment (not the exclusive use of a Phosphorus Threshold Soil Test Limit). The philosophy of limiting Phosphorus applications because Phosphorus is a "limited resource" needed by all people is not appropriate for codification into the Indiana Administrative Code.

Vegetative Management Systems:

327 IAC 19-2-42:

- *“Vegetative management system” means a vegetated area designed to accept contaminated run-off or waste liquid after settling for the purpose of treatment or infiltration into the soil.*

Vegetative Management Systems, Prohibited Soils:

327 IAC 19-12-6(c):

- *Vegetative management systems are prohibited in soils with a Unified Soil Classification of Pt, GW, GP, GM, GC, SW, SP, SM, or SC.*

Vegetative Management Systems constructed in soils other than those listed as prohibited are unlikely to fulfill the purpose stated in 327 IAC 19-2-42 of providing treatment or infiltration into the soil. Heavy soils are typically not conducive to growing and maintaining the plants necessary for treatment, and are not able to provide infiltration. The rule as drafted in 327 IAC 19-12-6(c) will virtually guarantee failure of any Vegetative Management System as defined in 327 IAC 19-2-42. The proposed rule should be redrafted to allow the use of proven Vegetative Management Systems and to allow their use in sandy soils.

Manure Storage Liners:

327 IAC 19-12-5(b)

- *Liners used in manure storage facilities must meet the following design standards:*
 - (1) Liners for facilities with at least ten (10) feet of one of the soils listed in subdivision (5) of this subsection immediately below the facility must:*
 - (A) be constructed of at least two (2) feet of soil with a hydraulic conductivity of 1×10^{-7} cm/sec or less; and*
 - (B) have a seepage rate that does not exceed one-fifty-sixth ($1/56$) cubic inch per square inch area per day.*
 - (2) Liners for facilities with less than ten (10) feet, but five (5) or more feet of one of the soils listed in subdivision (5) of this subsection immediately below the facility must:*
 - (A) meet the requirements in clause (1)(A) of this subsection; and*
 - (B) have a minimum forty (40) millimeter thick geomembrane, such as a high density polyethylene (HDPE) or polyvinyl chloride (PVC).*
 - (3) Liners for facilities with less than five (5) feet of one of the soils listed in subdivision (5) of this subsection immediately below the facility must:*
 - (A) meet the requirements in subpart (2) of this subsection; and*
 - (B) conduct ground water monitoring in accordance with rule 10 of this article.*

The proposed rule as drafted does not provide adequate protection since it allows the use of erodible clay soil as the only liner in certain conditions. The double liner and ground water monitoring should be required for all facilities. The clay soil liner should be protected from erosion in all instances by a synthetic liner.

Manure Application to Frozen or Snow Covered Ground:

327 IAC 19-14-4(e)(1):

- ***The following manure application activities are prohibited: the application of manure to frozen or snow covered ground.***

327 IAC 19-14-4 cites it's authority as originating in the following:

IC 13-14-8-7

IC 13-15-2-1

IC 13-18-10-4

IC 13-15-2-2(a)(6):

The boards may adopt rules under IC 4-22-2 and IC 13-14-9 to allow the department to issue permits that do the following: Provide owners and operators of facilities with as much operational flexibility as can reasonably be provided while being consistent with enforcement of permit requirements.

IC 13-18-10-4(2)(B) specifically requires that uniform standards for manure application are appropriate for a specific site. By prohibiting without exception the application of manure onto frozen or snow covered ground, the proposed rule prevents the application of site specific best management practices which may exist. In addition, the rule as drafted provides none of the flexibility contemplated by IC 13-15-2-2-(a)(6)

Frozen or snow covered ground applications should not be exclusively prohibited, but should be limited to appropriate locations and conditions. The application of manure onto frozen or snow covered ground should be allowed if conducted in accordance with a management plan that includes a field based suitability/risk assessment.

Setback Requirements:

327 IAC 19-14-6(a):

- *Except as otherwise provided under this section, application of manure and process wastewater must be in accordance with the setbacks in Table 1:*

Table 1.

SETBACK DISTANCES FROM DOWNGRAIENT SURFACE FEATURES (in feet)

Known Feature	Liquid Incorporation	Solid Manure Surface Application	Liquid Manure Surface Application		
			Pasture and Residue Cover	≤ 6% slope	> 6% slope
Public Water Supply Well	500	500	500	500	500
Public Water Supply Intake Structure	500	500	500	500	500
Surface Waters of the State	50	50	100	100	200
Sinkholes	50	50	100	100	200
Wells	50	50	100	100	200
Drainage Inlet	50	50	100	100	200
Property Lines	50	50	50	50	50
Roads	50	50	50	50	50

The setback distances listed in Table 1 represent a large departure from currently accepted best management practices with respect to Liquid Incorporation relative to property lines and roads. The suggested setback distances also reflect an erosion of private property rights relative to adjacent property lines, and remove any incentive for farms to employ Liquid Incorporation in an effort to attain more efficient land use. The proposed rule should be redrafted to reflect setback distances as listed in 327 IAC 16-10-4. If setbacks are required to protect the waters of the state they should be applied equally to all sources of fertilizer, organic or commercial.

Uniformity of Rule Application:

One issue of utmost concern to us is that all rules developed through this process must be evenly and equally applied to all CFO facilities regardless of size.

IDEM needs to develop a measurable, science based scorecard that guarantees all producers are being treated equally.

If a producer feels singled out they should be able to validate their concern against the scorecard with third party verification.